

Notice of Allowability

Application No.

10/748,562

Examiner

W. Patty Chen

Applicant(s)

CRAWFORD ET AL.

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/14/06.
2. ☒ The allowed claim(s) is/are 1-21,23,31,32,34,37 and 42-45.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed on Aug. 14, 2006 has been received and entered. Claims 25 and 26 are cancelled per the Amendment filed.

Election/Restrictions

Claim 1 is allowable. The restriction requirement among groups of sub-species, as set forth in the Office action mailed on Mar. 29, 2005, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 3, 6-9, 32, 37 and 42-45, directed to the sub-species of groups a, b and g in the least are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim. However, claims 27-30, 33, 35-36 and 39-40, directed to sub-species of groups (c)-(f) remain withdrawn from consideration because they do not all require all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

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Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

This application is in condition for allowance except for the presence of claim 52 directed to an invention non-elected without traverse. Accordingly, claim 52 has been cancelled.

This application is in condition for allowance except for the presence of claims 46-51 and 53 directed to species (2)-(5) non-elected without traverse. Accordingly, claims 46-51 and 53 have been cancelled.

This application is in condition for allowance except for the presence of claims 27-30, 33, 35-36 and 39-40 directed to species non-elected without traverse. Accordingly, claims 27-30, 33, 35-36 and 39-40 have been cancelled.

EXAMINER'S AMENDMENT

Authorization for this examiner's amendment was given in a telephone interview with the Attorney for Applicants on Nov. 9, 2006, hence claims 22, 24, 38 and 41 are cancelled

Claim 23 is amended as follows: "The method of claim ~~22~~ 1, wherein the ~~optical~~ beams comprise UV radiation".

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An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The title of the application has been amended as follows: Method of alignment of liquid crystals comprising exposing an alignment material to an interference pattern.

Allowable Subject Matter

Claims 1-21, 23, 31-32, 34, 37 and 42-45 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1 (Amended): Kim et al. (US 6153272) disclose in Figure 1 and the Abstract a method comprising exposing an alignment material to an interference pattern formed from two beams having circular polarization states (Column 7, lines 2-5; wherein circular polarized light beams can be used) to cause a chemical reaction in the alignment material and exposing the alignment material to a liquid crystal, wherein the liquid crystal aligns relative to the alignment material based on the interference pattern. Kim et al. further disclose in Column 12 lines 57-58 that the beams can comprise of different polarization states.

However, Kim et al. and the cited prior arts either alone or in combination fail to specifically teach or suggest that the two circular polarized beams are of opposite handedness such that the resulting interference pattern has uniform intensity across the surface of the alignment material.

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Therefore, claim 1 is deemed non-obvious and inventive over the prior arts, thus is allowed.

As to claims 2-21, 23, 31-32, 34, 37 and 42-45, since they either depend directly or indirectly on the allowed claim 1, therefore, are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. Patty Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

W. Patty Chen
Examiner
Art Unit 2871

WPC
11/09/06


ANDREW SCHECHTER
PRIMARY EXAMINER